WHAT IS CLAIMED IS:

1. A method to perform DC compensation on a Radio Frequency (RF) burst, wherein the RF burst is transmitted between a servicing base station and a wireless terminal in a cellular wireless communication system, the method comprises:

receiving the RF burst, wherein the RF burst is modulated according to either a first modulation format or a second modulation format;

producing a plurality of samples from the RF burst;

averaging at least some of the plurality of samples to produce a DC offset estimate;

subtracting the DC offset estimate from each of the plurality of samples;

identifying the modulation format of the RF burst from the plurality of samples;

adding the DC offset estimate to each of the plurality of samples when the second modulation format was identified as the modulation format of the RF burst; and

demodulating the plurality of samples according to the identified modulation format of the RF burst.

2. The method of Claim 1, wherein:

the first modulation format is GMSK; and

the second modulation format is 8PSK.

3. The method of Claim 1, wherein producing the plurality of samples from the RF burst, further comprises:

processing the first RF burst to produce a baseband signal;

extracting a training sequence from the baseband signal, wherein the training sequence comprises I phases and Q phases; and

sampling the training sequence to produce the plurality of samples, wherein the samples comprise both I phases and Q phases, and wherein the plurality of samples taken over the training sequence are averaged to produce the DC offset estimate.

4. The method of Claim 3, wherein the DC offset estimate comprises:

an I phase DC offset estimate; and

a Q phase DC offset estimate.

5. The method of claim 1, wherein the DC offset estimate is based upon all samples of the RF burst.

6. The method of Claim 1, further comprising:

receiving a subsequent RF burst within the data frame from the servicing base station, wherein the subsequent RF burst carries a plurality of modulated symbols ;

determining a first accumulated result from processing the subsequent RF and prior RF bursts according to the first modulation format;

determining a second accumulated result from processing the subsequent RF and prior RF bursts according to the second modulation format;

comparing the first accumulated result and the second accumulated result to determine the more favorable accumulated results;

identifying the modulation format associated with the subsequent RF burst based as the modulation format corresponding to the more favorable accumulated result;

demodulating the subsequent RF burst according to the identified modulation format; and

discarding the first RF burt when the identified modulation format of the subsequent RF burst compares unfavorably to the identified modulation format of the prior RF bursts.

7. The method of Claim 1, further comprising:

receiving a subsequent RF burst within the data frame from the servicing base station, wherein the subsequent RF burst carries a plurality of modulated symbols ;

determining a first accumulated result from processing the subsequent RF and prior RF bursts according to the first modulation format;

determining a second accumulated result from processing the subsequent RF and prior RF bursts according to the second modulation format;

comparing the first accumulated result and the second accumulated result to determine the more favorable accumulated results;

identifying the modulation format associated with the subsequent RF burst based as the modulation format corresponding to the more favorable accumulated result;

demodulating the subsequent RF burst according to the identified modulation format; and

reprocessing the first RF burt when the identified modulation format of the subsequent RF burst compares unfavorably to the identified modulation format of the prior RF bursts.

8. A wireless terminal that comprises:

a Radio Frequency (RF) front end;

a baseband processor communicatively coupled to the RF front end;

an enCOder/DECoder (CODEC) processing module communicatively coupled to the baseband processor;

wherein, the RF front end, the baseband processor, and the CODEC processing module are operable to:

receive a first RF burst, wherein the RF burst is modulated according to either a first modulation format or a second modulation format;

produce a plurality of samples from the first RF burst;

average the plurality of samples to produce a DC offset estimate;

subtract the DC offset estimate from each of the plurality of samples;

identify the modulation format of the RF burst from the plurality of samples;

add the DC offset estimate to each of the plurality of samples when the second modulation format was identified as the modulation format of the RF burst; and

demodulate the RF burst according to the identified modulation format.

9. The wireless terminal of Claim 8, wherein:

the first modulation format is GMSK; and

the second modulation format is 8PSK.

10. The wireless terminal of Claim 8, wherein, the RF front end, the baseband processor, and the CODEC processing module are further operable to:

process the first RF burst to produce a baseband signal;

extract a training sequence from the baseband signal, wherein the training sequence comprises I phases and Q phases; and

sample the training sequence to produce the plurality of samples, wherein the samples comprise both I phases and Q phases, and wherein the plurality of samples taken over the training sequence are averaged to produce the DC offset estimate.

11. The wireless terminal of Claim 10, wherein the DC offset estimate comprises:

an I phase DC offset estimate; and

a Q phase DC offset estimate.

12. The wireless terminal of Claim 8, wherein, the RF front end, the baseband processor, and the CODEC processing module are further operable to:

receive a subsequent RF burst within the data frame from the servicing base station, wherein the subsequent RF burst carries a plurality of modulated symbols ;

determine a first accumulated result from processing the subsequent RF and prior RF bursts according to the first modulation format;

determine a second accumulated result from processing the subsequent RF and prior RF bursts according to the second modulation format;

compare the first accumulated result and the second accumulated result to determine the more favorable accumulated results;

identify the modulation format associated with the subsequent RF burst based as the modulation format corresponding to the more favorable accumulated result;

demodulate the subsequent RF burst according to the identified modulation format; and

discard the first RF burt when the identified modulation format of the subsequent RF burst compares unfavorably to the identified modulation format of the prior RF bursts.

13. The wireless terminal of Claim 8, wherein, the RF front end, the baseband processor, and the CODEC processing module are further operable to:

receive a subsequent RF burst within the data frame from the servicing base station, wherein the subsequent RF burst carries a plurality of modulated symbols ;

determine a first accumulated result from processing the subsequent RF and prior RF bursts according to the first modulation format;

determine a second accumulated result from processing the subsequent RF and prior RF bursts according to the second modulation format;

compare the first accumulated result and the second accumulated result to determine the more favorable accumulated results;

identify the modulation format associated with the subsequent RF burst based as the modulation format corresponding to the more favorable accumulated result;

demodulate the subsequent RF burst according to the identified modulation format; and

reprocess the first RF burst according to the modulation format identified with the subsequent RF burst when the modulation format identified with the subsequent RF burst compares unfavorably to the modulation format identified with the first RF.

14. The wireless terminal of Claim 8, wherein the wireless terminal operates according to the GSM standard.

15. A wireless terminal that comprises:

a Radio Frequency (RF) front end;

a baseband processor communicatively coupled to the RF front end;

wherein, the RF front end and the baseband processor are operable to:

receive a first RF burst, wherein the RF burst is modulated according to either a first modulation format or a second modulation format;

produce a plurality of samples from the first RF burst;

average the plurality of samples to produce a DC offset estimate;

subtract the DC offset estimate from each of the plurality of samples;

identify the modulation format of the RF burst from the plurality of samples;

add the DC offset estimate to each of the plurality of samples when the second modulation format was identified as the modulation format of the RF burst; and

demodulate the RF burst according to the identified modulation format.

16. The wireless terminal of Claim 15, wherein:

the first modulation format is GMSK; and

the second modulation format is 8PSK.

17. The wireless terminal of Claim 15, wherein, the RF front end and the baseband processor are further operable to:

process the first RF burst to produce a baseband signal;

extract a training sequence from the baseband signal, wherein the training sequence comprises I phases and Q phases; and

sample the training sequence to produce the plurality of samples, wherein the samples comprise both I phases and Q phases, and wherein the plurality of samples taken over the training sequence are averaged to produce the DC offset estimate.

18. The wireless terminal of Claim 17, wherein the DC offset estimate comprises:

an I phase DC offset estimate; and

a Q phase DC offset estimate.

19. The wireless terminal of Claim 15, wherein, the RF front end and the baseband processor are further operable to:

receive a subsequent RF burst within the data frame from the servicing base station, wherein the subsequent RF burst carries a plurality of modulated symbols ;

determine a first accumulated result from processing the subsequent RF and prior RF bursts according to the first modulation format;

determine a second accumulated result from processing the subsequent RF and prior RF bursts according to the second modulation format;

compare the first accumulated result and the second accumulated result to determine the more favorable accumulated results;

identify the modulation format associated with the subsequent RF burst based as the modulation format corresponding to the more favorable accumulated result;

demodulate the subsequent RF burst according to the identified modulation format; and

discard the first RF burst according to the modulation format identified with the subsequent RF burst when the modulation format identified with the subsequent RF burst compares unfavorably to the modulation format identified with the first RF.

20. The wireless terminal of Claim 15, wherein, the RF front end and the baseband processor are further operable to:

receive a subsequent RF burst within the data frame from the servicing base station, wherein the subsequent RF burst carries a plurality of modulated symbols ;

determine a first accumulated result from processing the subsequent RF and prior RF bursts according to the first modulation format;

determine a second accumulated result from processing the subsequent RF and prior RF bursts according to the second modulation format;

compare the first accumulated result and the second accumulated result to determine the more favorable accumulated results;

identify the modulation format associated with the subsequent RF burst based as the modulation format corresponding to the more favorable accumulated result;

demodulate the subsequent RF burst according to the identified modulation format; and

reprocess the first RF burst according to the modulation format identified with the subsequent RF burst when the modulation format identified with the subsequent RF burst compares unfavorably to the modulation format identified with the first RF.

21. The wireless terminal of Claim 15, wherein the wireless terminal operates according to the GSM standard.